# NEW SOURCE REVIEW: RECOMMENDATIONS

## JUNE 2002

# Recommended Improvements to the New Source Review Program

## June 2002

The President's National Energy Policy Report directed the US Environmental Protection Agency (EPA), in consultation with the Department of Energy (DOE) and other relevant agencies, to review the New Source Review (NSR) program and to issue a report on the impact of the program on investment in new utility and refinery generation capacity, energy efficiency and environmental protection. Having carefully considered the comments received during this review and other relevant information, EPA has identified the following ways in which to reform existing rules and guidance to improve and streamline NSR applicability provisions. Also, with respect to electricity generators and refiners, these changes will help to address the extreme demands being placed on our nation's energy supply infrastructure. These changes would assure that the NSR program operates in a manner that provides greater regulatory certainty and flexibility for business investment decisions, while at the same time protecting the environment.

## (1) Plantwide Applicabililty Limits (PALs)

EPA would finalize its 1996 NSR reform proposal for PALs by allowing source owners to make changes to their facilities without obtaining a major NSR permit, provided their emissions do not exceed the plantwide cap. A source could apply for and obtain a PAL based upon its actual emissions baseline. The actual emissions baseline would be determined according to the method described in Section 4, below. The framework of the actual PAL requirements is as follows: PALs would be valid for a term of ten years. Once a PAL is established at a facility, the company may make any change without undergoing major NSR provided the emissions do not increase above the PAL level. Upon renewal of the PAL, the emissions levels set by the PAL may be reevaluated by the State or local permitting authority to determine the need for an adjustment based on air quality needs, advances in technology and control cost effectiveness considerations. A PAL may be increased provided certain criteria are met. If the area is nonattainment, the State must provide an opportunity for public participation, model the increase as appropriate, apply control technology to the changed or new emissions unit and secure the necessary offsets. If the area is in attainment, the State must provide an opportunity for public participation, model the increase, apply control technology to the changed or new emissions unit and undertake any mitigation measures that might be required. Using this approach, we also plan to develop an alternative that would give a source the option of obtaining a PAL based on allowable emissions.

We believe that PALs offer a number of advantages for industry, permitting authorities and the environment. First, PALs provide certainty and operational flexibility. Source owners would be able to make any change to their facilities without obtaining a major NSR permit, provided their emissions do not exceed the plantwide cap. We believe the cap ensures environmental protection and that facility owners that use PALs will have the incentive to install good controls to maximize their flexibility and certainty. Finally, the public obtains a complete picture of the emissions profile

of the source and is assured that there is an opportunity for public participation in the event emissions are increased in the future.

## (2) Clean Unit Exclusion

EPA would finalize its 1996 proposal for the Clean Unit Exclusion. A unit would be considered to be "clean" if it underwent a review process that resulted in its achieving federal Best Available Control Technology (BACT) or Lowest Achievable Emission Rate (LAER) control levels or comparable State minor source BACT. A clean unit would only trigger NSR if permitted allowable emissions increase. This exclusion would provide an incentive for source owners to install the best emission controls on new or modified emission units. Specifically, a source that underwent a valid BACT/LAER process or State minor source BACT since 1990 would be entitled to the exclusion. The exclusion would be valid for ten to fifteen years and would run from the date the control technology was installed or the project was implemented. Sources that installed Maximum Achievable Control Technology (MACT), Reasonably Available Control Technology (RACT) or undertook pollution prevention that required capital expenditures could also qualify for the exclusion, provided the results are determined to be comparable to BACT or LAER that would have been employed at the time the control measures or devices were originally installed. Finally, sources that invest capital to purchase equipment or implement processes that are inherently clean or lower emitting and which achieve emission reductions comparable to BACT or LAER at the time the investment was made would also qualify for the exclusion. The Clean Unit Exclusion would provide greater certainty and flexibility for changes at clean emission units without sacrificing the environmental benefit provided by the current program or meaningful public participation.

## (3) Pollution Control and Prevention Projects

The EPA's policy is to promote pollution control and prevention approaches and to remove regulatory disincentives to companies seeking to develop and implement these solutions to the extent allowed under the Clean Air Act. As part of finalizing its 1996 NSR reform rulemaking, the Agency will revise its Prevention of Significant Deterioration (PSD) and nonattainment NSR regulations to exclude from NSR projects that will result in a net overall reduction of air pollutants, including where a source switches to a cleaner burning fuel, regardless of the primary purpose of the project. Specifically, the Agency will revise its PSD and nonattainment regulations to exclude from NSR the addition, replacement or use at an existing emissions unit of any system, process, control or device whose overall net impact on the environment is beneficial, subject to certain conditions. As an overarching safeguard, a project cannot result in an emissions increase that will cause a violation of a National Ambient Air Quality Standards (NAAQS) or PSD increment or result in an adverse impact on Class I areas. Moreover, the complete replacement or reconstruction of an existing emissions unit will not qualify under this exclusion. For example, replacement of a pulverized coal boiler with an atmospheric fluidized bed combustion unit, with inherent NOx and SO2 reduction technology, would not be treated as a pollution control project for purposes of this exclusion. Projects qualifying for this exclusion will not be considered to be a "physical or operational change" within the definition of major modification under the Act.

EPA will provide a list of environmentally beneficial technologies that will be presumptively eligible for the exclusion. This list shall include those technologies identified in the WEPCO pollution control exclusion (40 CFR Section 52.21(b)(32)) and those set forth in EPA's 1996 proposed NSR reform rulemaking (61 FR 38250, 38261 (1996)). Unless covered under another NSR exclusion, pollution prevention and control projects that are not on this list must be determined to be environmentally beneficial before such projects can qualify to be excluded from NSR. Furthermore, new pollution control and prevention technologies that are not on the list also can qualify for case-by-case approval for this exclusion if their effectiveness in reducing emissions is demonstrated in practice, they are determined to be environmentally beneficial and their application will not cause a violation of a NAAQS or PSD increment or result in an adverse impact on Class I areas. EPA will establish a process through rulemaking for adding pollution control and prevention technologies to the list of projects that will be presumed to be environmentally beneficial.

A source may qualify for the exclusion by providing prior notice to the permitting authority and maintaining records supporting the source's determination on site. A source would have the option of seeking a determination from its permitting authority prior to implementing the exclusion.

## (4) Actual to Projected Future Actual Methodology

EPA would finalize its 1996 NSR reform rulemaking by using an actual to projected future actual methodology for calculating emissions increases for all industrial sectors. Owners and operators of facilities would calculate emissions increases for a physical change or change in method of operation at an existing unit by comparing representative pre-change actual emissions with projected post-change actual emissions. The "actual to future actual" test would be applied to all physical or operational changes at existing sources, except those that are an addition of a new unit or constitute a complete replacement of an existing unit. Records supporting the source's determination and records of actual emissions for the following five years must be maintained on site.

**Causation:** Consistent with pre-existing statutory and regulatory requirements, only emissions increases caused by a given change are considered in measuring the emissions increase associated with the change. In particular, as part of the actual to projected future actual methodology, EPA will continue to apply the causation test incorporated into the WEPCO rule. EPA will exclude from the emissions increase calculation that portion of the post-change emissions that both: (1) could have been accommodated before the change within the representative baseline period; and (2) is attributable to an increase in projected capacity utilization at the unit that is unrelated to the particular change.

**Actual Emissions Baseline:** For sources other than electric utility steam generating units, the actual emissions baseline will be the highest consecutive 24 month period within the immediately preceding ten years, taking into account the current emissions factor (which would reflect emissions limitations, other required emissions reductions, and permanent shutdowns since

the baseline period) in combination with the utilization level from the 24-month time period selected.

## (5) Routine Maintenance, Repair and Replacement (RMR&R)

**Safe HarborTest:** Through notice and comment rulemaking, EPA will set forth cost-based thresholds using well-established precedents from the Agency's longstanding New Source Performance Standard (NSPS) regulations. Projects whose aggregated costs are below the threshold would automatically be given RMR&R treatment. Projects whose costs exceed the threshold would remain eligible for RMR&R treatment if they otherwise qualify, without any presumption that they did not qualify by virtue of their being outside the safe harbor.

In approaching this test, we have considered two different provisions in the NSPS standards. First, the reconstruction provisions of 40 CFR Section 60.15 clearly provide that capital replacement value of an affected source is a relevant basis for determining the need for installing modern pollution controls when a project is implemented. Second, the NSPS excludes projects that increase utilization at an affected source if they come below "annual asset guideline repair allowance" percentage thresholds (defined by the IRS for specific industry categories) ranging from 1.5 to 15 percent.

These NSPS provisions would be adapted to operate in the NSR context. For example, the NSPS limits operate on specific projects, but in the context of an RMR&R safe harbor, annual dollar cost thresholds, averaged on a rolling basis over a 5-year period (except where maintenance cycles in a particular industry dictate a different period) established for entire utility stationary sources and refinery and other industry processing and production units, might be more appropriate. These thresholds would be applied so that if the aggregate cost of maintenance expenses and capital repair and replacement projects for the relevant unit do not exceed the specified dollar threshold then the activities would be deemed to be "routine maintenance" and, thus, not subject to NSR.

The cost threshold for the relevant source or unit would be set so as to cover RMR&R capital and non-capital costs incurred to facilitate the safety, efficiency, and reliability of the operation of the unit. In the context of the NSPS increase in production rate exclusion, these are set by reference to historical invested basis. In the context of establishing a safe harbor for routine maintenance, repair, and replacement, however, a more appropriate comparison point might be capital replacement cost or another measure that sets a consistent threshold for all facilities in a given industry.

As noted above, under the NSPS exclusion for increases in production rate, the annual cost thresholds are set on an industry-by-industry basis, with an "annual asset guideline repair allowance" percentage assigned to each industry. These percentages range from 1.5% to 15%. There is good reason to think that the industry-specific basis and the specific percentages are appropriate in the RMR&R context as well. EPA would also entertain comment, however, on the appropriateness of

the industry-specific approach and the appropriateness of the particular thresholds for the various industries in this context.

> ***Excluded Costs:*** Costs incurred for installing and maintaining pollution control technology would not be included in calculating costs under the safe harbor threshold test. EPA also would consider excluding certain costs associated with forced outages involving the unanticipated failure of one or more major components.
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> ***Expenses Beyond the Safe Harbor:*** If aggregate maintenance costs of work undertaken exceed the applicable cost threshold, that work would not thereby be presumed to be non-routine.
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> ***Other Considerations:*** EPA also would take comment on particular safe harbor implementation issues. For example, as noted above, the Agency intends to set thresholds at levels that will cover the RMR&R costs needed to facilitate the safety, efficiency, and reliability of operations at industrial facilities. Because expenditures that fall below these thresholds would automatically be excluded from NSR, the Agency is concerned that, in some cases, such thresholds might allow a facility to undertake relatively low-cost projects (such as installation of new burners or painting equipment) that can increase emissions significantly and should not automatically be excluded from NSR. As part of the rulemaking for setting cost-based thresholds, EPA could identify specific types of projects that cannot be excluded from review by virtue of the thresholds. However, for some types of sources, such as electric utilities and refineries, the better approach may be to utilize maximum achievable hourly emissions rate as the mechanism for addressing this concern.

**Definitional Issues:** Through notice and comment rulemaking, EPA will propose that the replacement of existing equipment with equipment that serves the same function and that does not alter the basic design parameters of the unit (for example in the case of utilities this means maximum heat input and fuel consumption specifications) typically would be considered RMR&R. In addition, this rulemaking will provide clear guidelines for RMR&R activities undertaken to facilitate, restore, or improve efficiency, reliability, availability, or safety within normal facility operations. EPA also will consider provisions identifying the types of projects that are undertaken as RMR&R activities in particular industrial sectors. The absence of a project from such a list would not disqualify it from being considered RMR&R but would simply result in its being evaluated on a case-by-case basis as to whether it was routine.

In the case of the utility sector, equipment that is maintained, repaired and replaced can be categorized along functional lines (for example, boiler tube assemblies, air heaters, coal handling equipment, pumps, fans, etc.) Using these categories, EPA could identify RMR&R activities undertaken to facilitate reliability, availability, efficiency, or safety within normal facility operations. In particular, the EPA would focus on projects where the consequences of delaying or

foregoing the work could lead to lower availability or the failure of the generating unit and create or add to safety concerns. For example, DOE suggests that such a rule could be informed by maintenance, repair and replacement activities identified as common practice by the North American Electric Reliability Council.

Along the same lines, EPA could identify routine maintenance, repair and replacement undertaken by refineries during "turnarounds."

Also in the context of RMR&R, EPA will address energy efficiency projects. EPA will affirm that existing NSR rules are not intended to discourage activities that increase efficiency. The Agency will propose that energy efficiency improvements undertaken through routine maintenance, replacement and repair activities will be considered to be RMR&R. In this context, energy efficiency projects will be considered to be routine if the improvement results from the replacement of existing equipment with equipment that serves the same function and that does not alter the original design parameters of the unit (for example in the case of utilities this means maximum heat input and fuel consumption specifications).

EPA will also take steps to provide additional certainty about RMR&R activities during the pendency of this rulemaking.

## (6) Debottlenecking

Through notice and comment rulemaking, EPA will clarify that, when calculating actual emissions associated with a physical change or change in the method of operation, sources generally should look only at the unit undergoing the change. Emissions from units "upstream" or "downstream" of the unit being changed should be considered only when the permitted emissions limit of the upstream or downstream unit would be exceeded or increased as a result of the change.

## (7) Aggregation

Through notice and comment rulemaking, EPA would clarify its nonaggregation policy as follows. For purposes of determining NSR applicability, a project would be considered separate and independent from any other project at a major stationary source unless (1) the project is dependent upon another project to be economically or technically viable or (2) the project is intentionally split from other projects to avoid NSR. Also, EPA generally would defer to the States to implement the Agency's aggregation rule.